

EFFECTIVE DATE

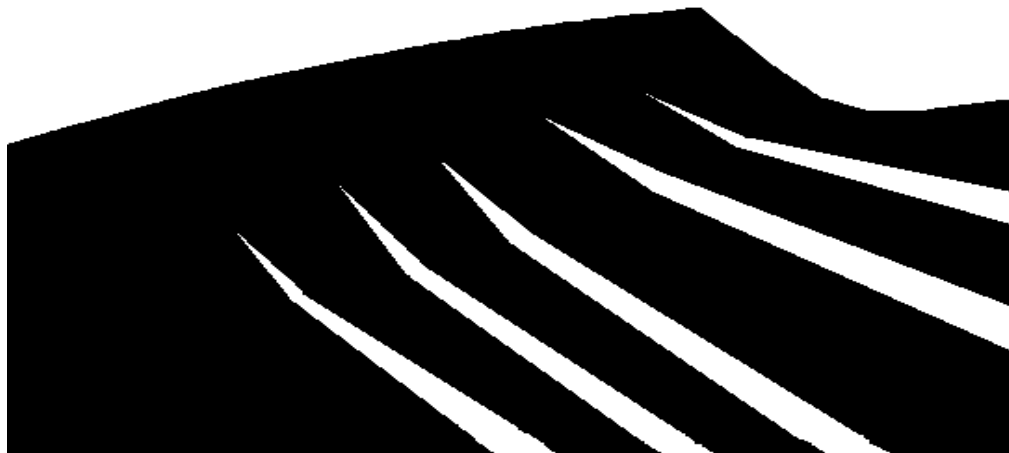
September 10, 1996

LANL-YMP-QP-03.23, R4

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PREPARATION AND REVIEW OF TECHNICAL INFORMATION PRODUCTS AND STUDY PLANS

LOS ALAMOS QUALITY PROGRAM



APPROVAL FOR RELEASE

G. Y. BUSSOD - PREPARER

Signature on file

DATE

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M. J. CLEVINGER - QUALITY ASSURANCE PROJECT LEADER

Signature on file

DATE

Date on file

J. A. CANEPA - TECHNICAL PROJECT OFFICER

Signature on file

DATE

Date on file

Los Alamos
Yucca Mountain Site
Characterization Project

HISTORY OF REVISIONS

REVISION NO.	EFFECTIVE DATE	PAGES REVISED	REASON FOR CHANGE
R0	03/16/92	All	Complete rewrite that combines TWS-QAS-QP-03.2, R0, and TWS-QAS-QP-03.3, R0.
R1	01/31/94	All	Complete rewrite to include new QARD requirements.
R2	06/13/94	All	To simplify process and address RTN review comments.
R3	09/05/95	3, 5, 6, 8, & Att. 1	Minor editorial changes to better describe the data management interface.
R4	09/10/96	All	Minor editorial changes to clarify process and incorporate revised QARD requirements.

Los AlamosYucca Mountain Site
Characterization Project

PREPARATION AND REVIEW OF TECHNICAL INFORMATION PRODUCTS AND STUDY PLANS

1.0 PURPOSE

This procedure describes the process to prepare and review technical information products (TIPs) and study plans for the Los Alamos National Laboratory (Los Alamos) Yucca Mountain Site Characterization Project (YMP or Project).

2.0 SCOPE

- 2.1 This procedure governs the preparation, review, and approval of Los Alamos YMP TIPs and study plans.
- 2.2 This procedure applies to all Los Alamos and Los Alamos subcontractor YMP personnel (hereafter referred to as YMP personnel) who work under the Los Alamos YMP quality assurance program.
- 2.3 In-process TIPs and study plans initiated under previous revisions of this procedure must meet the minimum requirements of this procedure. The author initiates a Publication Traveler (Attachment 3) for publications in process on the effective date of this revision. The author completes Section I of this form and marks all steps that have previously been completed N/A. Completion of the current form continues at the current step of the review process and the remaining spaces on the previous form are also marked N/A. Both forms are included in the Records Package.

3.0 REFERENCES

LANL-YMP-QP-08.3, Transfer of Data
LANL-YMP-QP-17.6, Records Management
YAP-2.2Q, Preparation, Review, Approval, and Revision of Site Characterization Plan Study Plans
YAP-30.12, Publications Review, Approval and Distribution

4.0 DEFINITIONS

4.1 Study Plan

A study plan is a Department of Energy (DOE) scientific investigation planning document that describes the studies, activities, tests, and analyses that constitute site characterization activities as defined by the Nuclear Waste Policy Act of 1982 and its amendments. Study plans describe in more detail the studies presented in Chapter 8 of the Site Characterization Plan (SCP) and/or the progress reports that supplement the SCP. Project Office procedure YAP-2.2Q describes the study plan process.

4.2 Technical Information Product (TIP)

A TIP is a report released by the Los Alamos YMP; it contains technical information, such as data, analyses, interpretations, or design information and is a product capable of being referenced. TIPs include journal articles, Los Alamos manuscript or progress reports, conference proceedings, abstracts (those accepted for publication), milestone reports required by the DOE Yucca Mountain Site Characterization Project Office (Project Office), and contributions to other publications, such as chapters in books. Written materials such as exhibits, letters, memos, presentation handouts, Los Alamos YMP technical status reports, and Los Alamos YMP monthly reports are exempt.

4.3 Technical Review

A technical review is a documented review performed by technically qualified personnel who are independent of the work (i.e., the reviewer is not a co-author and did not participate directly in the work) but who have similar technical expertise as those who performed the original work. Technical reviews are in-depth critical reviews and evaluations of documents, materials, or data that require technical validation for applicability, correctness, adequacy, and completeness.

5.0 RESPONSIBILITIES

The following personnel are responsible for the activities identified in Section 6.0 of this procedure.

- Author of study plan or TIP
- Technical Project Officer (TPO) or designee

6.0 PROCEDURE

The use of this procedure must be controlled as follows:

- If this procedure cannot be implemented as written, Los Alamos YMP personnel should notify appropriate supervision. If it is determined that a portion of the work cannot be accomplished as described in this QP, or would result in an undesirable situation, that portion of the work will be stopped and not resumed until this procedure is modified or replaced by a new document that reflects the current work.
- YMP personnel may use copies of this procedure printed from the controlled document electronic file; however, YMP personnel are responsible for assuring that the correct revision of this procedure is used.
- When this procedure becomes obsolete or superseded, it must be destroyed or marked “superseded” to ensure that this document is not used to perform work.

6.1 Prepare Publication

- 6.1.1 The **author** prepares a draft of the TIP or study plan. Content requirements for TIPs are prescribed in Attachment 1. Format and content requirements for study plans are prescribed in Attachment 2.
- 6.1.2 The **author** dates the TIP or study plan, marks it “DRAFT”, and retains a clean copy for the record package.
- 6.1.3 The **author** initiates a Publication Traveler by completing Section I of Attachment 3.

6.2 Conduct Technical Review

- 6.2.1 The **author** initiates a TIP/Study Plans Review Results for the technical review by completing Section I of Attachment 4, as appropriate.
- 6.2.2 The **author** selects at least one technical reviewer to perform a technical review.
 - 6.2.2.1 If a reviewer is not associated with the Los Alamos YMP, the **author** completes a Reviewer Qualifications (Attachment 6) and forwards a copy of the approved Reviewer Qualifications to the Training Coordinator as a privileged record.
- 6.2.3 The **author** sends the draft publication, Review Sheets, and if appropriate, pertinent background information or data and additional review criteria, to the reviewer.
- 6.2.4 Comments made by the reviewer are resolved, as applicable. The **author** makes the revisions to the TIP or study plan and returns the TIP/Study Plans Review Results to the reviewer for signature.
- 6.2.5 The **author** prepares a revised, dated draft of the publication and clearly marks it “DRAFT”.
- 6.2.6 For a TIP, the **author** obtains a Los Alamos Data Tracking Number (DTN), if applicable, from the Technical Data Coordinator, in accordance with QP-08.3. A DTN is applicable when a TIP contains unique site characterization data; this is determined by mutual agreement between the author and Technical Data Coordinator. The DTN is cited as described in Attachment 1.
- 6.2.7 If data changes once a DTN has been assigned, the **investigator** responsible for the data notifies the Technical Data Coordinator and the change is documented in accordance with QP-08.3.
- 6.2.8 If the TIP contains data that has been submitted to the technical database, the **author** obtains a copy of the Technical Data Information Form (TDIF) from the Technical Data Coordinator.

- 6.2.9 The **author** forwards the revised draft publication, Publication Traveler, TDIF (if applicable), TIP/Study Plans Review Results and Review Sheet(s), and if appropriate, pertinent background information, data or additional review criteria that were addressed by the reviewer, to the TPO.

6.3 Conduct TPO Review

- 6.3.1 The **TPO** conducts a review of a TIP or study plan for content, quality assurance (for study plans only), documentation requirements and policy using Attachment 1 (for TIPs) and Attachment 2 (for Study Plans) as guidance. The TPO may provide additional review criteria.
- 6.3.2 If no comments are made, the **TPO** signs Section II of the Publication Traveler and proceeds to subsection 6.3.7.

OR

- 6.3.3 If the TPO has comments, the **TPO** documents comments on a Review Sheet, indicates on the Publication Traveler that comments are attached, signs the appropriate section of the Publication Traveler, and returns the Review Sheet and Publication Traveler to the author.
- 6.3.4 The **author** and the **TPO** resolve review comments and the author makes the appropriate revisions to the publication.
- 6.3.5 The **author** prepares a revised, dated draft of the publication, clearly marks it "DRAFT", and retains a copy for the records package.
- 6.3.6 The **author** forwards the revised draft publication, the Publication Traveler, and TIP/Study Plans Review Results and Review Sheet(s) to the TPO.
- 6.3.7 When the TPO's comments have been adequately addressed, the **TPO** signs the TIP/Study Plans Review Results and transmits the TIP or study plan, TDIF (if applicable), and TIP/Study Plans Review Results and Review Sheet(s) to the Project Office for review. Copies of the transmittal are sent to the author.
- 6.3.8 For study plans, the **TPO** returns the Publication Traveler and the publication to the author for processing in accordance with subsection 6.5.
- 6.3.9 For TIPs, the **TPO** retains the Publication Traveler in the Resident File until the Project Office returns the publication. The **TPO** sends the TIP/Study Plans Review Results and Review Sheet(s) back to the author, who retains them for the records package.

NOTE: The Los Alamos study plan review process is complete when the TPO sends the study plan to the Project Office. Further reviews and revisions become the responsibility of the Project Office, who will maintain the appropriate records.

6.4 Resolution of Project Office Review Comments

6.4.1 Once the **Project Office** performs a review (in accordance with YAP-30.12) and approves the TIP or sends review comments.

6.4.1.1 If the TIP is approved, the **TPO** proceeds to subsection 6.4.4.

OR

6.4.1.2 If the TIP is not approved, the **TPO** forwards the Publication Traveler and the Project Office comments to the author for resolution and revision.

6.4.2 The **author** resolves the comments, prepares a revised dated draft, signs Section III of the Publication Traveler, and sends the revised TIP and the Publication Traveler to the TPO.

6.4.3 Subsections 6.4.1 through 6.4.2 are repeated until the Project Office approves the TIP.

6.4.4 After a TIP is approved, the **TPO** signs and dates Section IV of the Publication Traveler and sends the completed form, copies of associated documentation, and a copy of Project Office approval to the author. The **author** retains a copy of the version approved by the Project Office for the records package.

6.4.5 The **author** proceeds with publication. The author may remove references to quality assurance grading packages (if any), laboratory notebooks, accession numbers, or other Project-related information that are not appropriate for publication. However, this information is retained in the records package.

6.5 Prepare the Records Package

When all items listed in subsection 7.1 or 7.2 (as appropriate) are complete and available, the **author** prepares a records package and sends it to a Los Alamos Records Processing Center in accordance with QP-17.6.

7.0 RECORDS

NOTE: The Reviewer Qualifications is transmitted as a privileged record to the Training Coordinator. It does not become part of the TIP or study plan record package.

7.1 For TIPs, a records package is prepared that includes the following:

- completed Publication Traveler,
- the TIP/Study Plans Review Results,
- the draft that was technically reviewed,

- the version approved by the Project Office,
- if the TIP is a final scientific and technical report (i.e., LA-MS Report), the final published version is included.
- Project Office approval letter,
- pertinent correspondence related to these documents.

7.2 For Study Plans, a records package is prepared that includes the following:

- completed Publication Traveler,
- the TIP/Study Plans Review Results,
- the draft that was technically reviewed,
- study plan (as originally submitted to the Project Office; earlier drafts may be included in the records package but are not required),
- pertinent correspondence related to these documents.

8.0 TRAINING REQUIREMENTS

8.1 Prior to conducting work described in Section 6.0, the author and the TPO (or designee) require training to this procedure. Training to this procedure is accomplished by “read only.”

8.2 The technical reviewer, (who receive instructions on Attachment 4), and co-authors who do not perform any of the tasks described herein are not required to train to this procedure.

9.0 ATTACHMENTS

Attachment 1: Content of a Technical Information Product (1 page)

Attachment 2: Format and Content of a Study Plan (3 pages)

Attachment 3: Publication Traveler (1 page)

Attachment 4: TIP/Study Plan Review Results (1 page)

Attachment 5: TIP/Study Plan Review Sheet (1 page)

Attachment 6: Reviewer Qualifications (1 page)

CONTENT OF A TECHNICAL INFORMATION PRODUCT

Technical Information Products (TIPs) include the following:

1.0 DATA REFERENCE

All data used or presented are to be referenced. Referenced materials may include journals, handbooks, documented personal communications, laboratory notebooks, or other sources. Each reference needs to be described clearly. If data are from a laboratory notebook a unique identification number of the notebook and page numbers containing the applicable data within the notebook are referenced. Notebook references may be placed in the acknowledgment section, the bibliography, an appendix, or as footnotes.

2.0 COMPUTER SOFTWARE QUALITY ASSURANCE

If computer software has been used to generate data in the report, the author must state whether or not the codes were developed and documented in accordance with Los Alamos quality assurance requirements. The statement may be placed in the acknowledgment section, an appendix, or as a footnote.

3.0 ACKNOWLEDGMENT OF PROJECT SUPPORT

The TIP must acknowledge funding support from the Yucca Mountain Site Characterization Project. If no new data are presented, a statement to that effect is included. A Los Alamos Data Tracking Number, if applicable, is cited. The final published report and the data contained within must be traceable to the data source. This is accomplished by the use of Data Tracking Numbers described in QP-08.3. All of this information is usually placed in the acknowledgment section of the publication. An example statement is given below.

This work was supported and managed by the U.S. Department of Energy, Yucca Mountain Site Characterization Office. The Los Alamos Data Tracking Number for this work is LAXXXXXXXXXXXXX.YYY. The record package memorandum traceability information is (e.g., title or subject of the TIP).

4.0 PROPER REFERENCE TO THE PROJECT

The title of the Project changes frequently as does the generic reference to the repository (e.g., proposed, potential, candidate). The author should contact the Technical Project Officer for the proper reference to the Project.

FORMAT AND CONTENT OF A STUDY PLAN

The following outline describes the information that will be presented in the Study Plans. The items listed in the outline will be addressed to the extent that each item applies. Not all items will be applicable in all studies.

In some cases, tests and analyses may be planned for later stages in the study for which the detailed plans depend on the results of earlier tests and analyses. In such cases, the initial study plan will present complete descriptions of the test analyses that occur early in the study and less detailed information for tests and analyses that occur later.

1.0 ABSTRACT

An abstract is required and is inserted before the Table of Contents.

2.0 PURPOSE AND OBJECTIVES OF STUDY

Describe the objectives of the study: what technical issues of importance to the project will be addressed by the study and what aspect of site characterization will be accomplished through the study. Note any changes from activities as described in the Site Characterization Plan.

3.0 SCOPE OF WORK

Describe the general approach for completing the study, including as appropriate an evaluation of existing literature; a description of the key parameters that will be measured or observed and analyzed in the study, and a description of the methods, including the need for implementing procedures, that will be used to complete the study. Include a discussion of the technical methodology to be used and a listing of the primary tasks involved. Discuss methods for determining accuracy, precision, and the representativeness of the results. Address the need for records to be generated during the study and provide a means for recording objective evidence of the results of the work. Provide illustrations such as maps, cross sections, and schematic layouts of tests or other planned activities. Identify required prerequisites, special controls, environmental conditions, processes or skills, if applicable.

3.1 If the study proposes the observation and description of features in the field, provide discussion on:

- The area (and its approximate boundaries) to be studied.
- Aspects of the area that are known or are poorly known.
- Type of data to be collected.
- Approximate location and number of tests.
- Identification of field equipment required, if appropriate.
- Methodology or classification system to be used.
- Product, maps, cross sections, etc., to be produced.

3.2 If the study proposes laboratory or field testing, provide discussion on:

- The test methods to be used.
- Approximate location and number of tests.
- The representativeness of the test in terms of spatial and temporal variability of the parameters that will be measured.
- Identification of laboratory testing equipment.
- Specific constraints on testing described in the study. Factors to be considered include potential impacts on the site from testing, whether the tests need to simulate repository conditions, applicability of tests conducted in the laboratory to the scale of phenomena in the field, generic and site specific test to test interference, significant interference between tests and design and construction of the Exploratory Studies Facility, and alternative tests methods and a rational for selection a specific method, if appropriate.

3.3 If the study proposed analyses, provide discussion on:

- The purpose of the analyses. Indicate any sensitivity or uncertainty in the analyses that will be performed.
- The methods of analysis, including any analytical expressions or statistical methods that will be employed.
- The data input requirements of the analysis.
- The representativeness of the analytical approach (e.g., with respect to spatial and temporal variability of existing conditions and future conditions) and indicate limitations and uncertainties that will apply to the results.
- Identification of applicable standards and criteria.

3.4 If the study or analyses propose synthesis and modeling, provide discussion on:

- Scope of the data to be included in the study.
- The methods to be used, including a list of computer software, if applicable.
- The objectives or problems that will be addressed by the study.
- The relationship of this study to pre-existing models or syntheses.
- The sensitivities of the model to input and calculation methods.

- How the model or synthesis will be tested against data and other models.
- How the model will be updated to incorporate new data.

4.0 APPLICATION OF RESULTS

Discuss how the results of this study will support performance assessment and design activities and other site characterization studies. Provide specific information about the way data from this study will be used in other studies and/or activities, including performance assessment design and site characterization. Discuss the technical issues that will be addressed by the data collected under this study.

5.0 SCHEDULE

Summarize the schedule for the study, including the estimated length of the investigation and any milestones and decision points for the study. Show the interrelationship with other studies, indicating dependencies on data derived from other studies and activities that will affect or be affected by the scheduled completion of this study.

PUBLICATION TRAVELER

SECTION I. (Author completes)

TITLE: _____

AUTHOR(S): _____

WBS NO: _____ UNIQUE IDENTIFIER: _____ LOS ALAMOS DTN
NO.: (If applicable) _____

CHECK ONE

☐

STUDY PLAN

☐

TIP

FOR TIPS:

☐

ABSTRACT

☐

MILESTONE (Number _____)

☐

CONFERENCE PROCEEDINGS

☐

LA MANUSCRIPT REPORT

☐

JOURNAL ARTICLE

☐

OTHER

NAME OF CONFERENCE, DATE, NAME OF JOURNAL ARTICLE, ETC

SECTION II. (TPO Completes)

I HAVE REVIEWED THE TIP OR STUDY PLAN FOR CONTENT, QUALITY ASSURANCE, AND POLICY.

COMMENTS ATTACHED: ☐ YES ☐ NO (If YES, a Review Sheet will be attached)

TPO: _____
Print name Signature Date

SECTION III. (Author completes)

ALL REVIEW COMMENTS HAVE BEEN RESOLVED.

AUTHOR: _____
Print name Signature Date

SECTION IV. (TPO Completes)

THIS TIP OR STUDY PLAN IS ACCEPTABLE AND MAY BE PUBLISHED AS APPROPRIATE

TPO: _____
Print name Signature Date

TIP/STUDY PLANS REVIEW RESULTS

SECTION I. (Preparer completes)

UNIQUE IDENTIFIER: _____ REVISION: _____ TITLE: _____

PREPARER'S NAME: _____ PHONE: _____ MS: _____ DUE BY: _____

Print name

SECTION II. (Reviewer completes)

REVIEWER INSTRUCTIONS:

1. Review the document for applicability, correctness, technical adequacy, and completeness. Additional criteria may be added.
2. For TIPs, data presented are suitable for the intended use as presented in this report.
3. For comments, enter the location of the section and the proposed actions on the review sheet continuation page. If "no comments," check the "No Comments" box.
4. Any changes to original entries must be initialed and dated.
5. After completing the review, return the review sheets to the preparer.
6. After review comments have been addressed, sign, date, and return review sheet(s) to preparer, if applicable.

I HAVE FOLLOWED THE INSTRUCTIONS FOR REVIEWING THIS DOCUMENT.

☐ Comments Attached

☐ No Comments

REVIEWER: _____

Print name Signature MS or location Date Phone

SECTION III. Signature below indicates that all comments have been resolved satisfactorily.

N/A

☐

REVIEWER: _____

Signature Date

TIP/STUDY PLAN REVIEW SHEET

UNIQUE IDENTIFIER: _____ REVISION: _____ REVIEWER: _____

LOCATION	REVIEWER'S COMMENTS	PREPARER'S RESPONSE
EXAMPLE		

REVIEWER QUALIFICATIONS

NOTE: TO BE COMPLETED ONLY IF REVIEWER IS NOT ASSOCIATED WITH YMP

TITLE OF PUBLICATION: _____

AUTHOR(S): _____

BRIEF DESCRIPTION OF CONTENT: _____

REVIEWER: _____

ADDRESS: _____ PHONE: _____

REVIEWER'S CURRENT POSITION AND PRIMARY WORK: (If within LANL, include group designation)

OTHER COMMENTS: _____

YMP AUTHOR'S APPROVAL:

NAME: _____
Print name Signature Date

THIS FORM IS PRIVILEGED INFORMATION. FORWARD TO TRAINING COORDINATOR, MS J521